

Infinite matters & their origin story.

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List of facts

1. [∞ - kinds of (factors/natures in ∞ physical/biological/chemical/ ∞ other significant kinds]
2. [∞ - kinds of velocities of galaxies like dispersion velocities]
3. [dark/ ∞ kinds of matters are inferred from (∞ - factors/natures & also due to how cosmic atmospheric reason]
4. ∞ growth of the galaxies & universes & multiverses & infiniteverses
5. ∞ Energy fraction of dark matter is incorrect (as due to generation from special bodies)
6. ∞ Black body radiation dominates matters component
7. ∞ cosmic acceleration due to dark energy (negative pressure)
8. ∞ matter (dark) has negative mass
9. ∞ radiation dominated epoch
10. ∞ temp anisotropies of cosmic microwave background (CMB)
11. ∞ Fluctuation Spectrum of density perturbations is nearly scale – invariant
12. ∞ power spectrum of density perturbations originated from quantum fluctuations of a scalar field generated during inflation
13. ∞ dark matter & dark energy interaction affects the acceleration of universe in strange ways
14. ∞ WMAP data, energy components at the decoupling epoch are dark matter, radiations (photons, neutrinos, baryons) with dark energy in heavy amount/different ∞ -forms
15. ∞ dark matter effects total energy density of universe & the other special objects in galaxies, universe, multiverse- ∞
16. ∞ redshift inaccurate value
17. ∞ dark energy with constant energy density are the so-called cosmological constant (Λ)
18. ∞ Λ acts as negative pressure against gravity
19. ∞ recession speeds of distant galaxies due to Hubble
20. ∞ Λ as vacuum energy density
21. ∞ Inaccurate calculation of dark energy (density) (Λ)
22. ∞ Einstein given the energy momentum tensor $T_{\mu\nu}$ with a negative pressure
23. ∞ Quintessence \rightarrow scalar fields \rightarrow slowly varying potentials that drives the k- essence \rightarrow scalar field kinetic energy \rightarrow acceleration
24. ∞ Scalar – field/ ∞ kinds of fields of dark energy & dark matter & ∞ kinds of matters
25. ∞ Λ -cold dark matter (Λ CDM) model \rightarrow Lagrangian Density (Ricci Scalar)
26. ∞ Modified Gravity as scalar-tensor theories
27. ∞ scalar fields (ϕ) & Scalar R \rightarrow couples \rightarrow S.Field couples to $F(\phi)R$
28. ∞ Dilation Gravity
29. ∞ Gravitational Transfer from the 0 to ∞ dimensions & $(-\infty, 0)$ dimensions & the infinitesimal dimensions
30. ∞ Quantum & Classical & General Relativity & co-other theories at once
31. ∞ Dark Energy varies/constant/ ∞ other forms with position/times/special object/atmospheric
32. ∞ Dark Matter & Energy deviations/Integration / effects of ∞ kinds / derivations
33. ∞ Dark Energy \rightarrow shift \rightarrow position of acoustic peaks in CMB anisotropies \rightarrow large scale CMB spectrum (Sachs- Wolfe Effect)
34. ∞ SNIa & CMB \rightarrow tight bounds of eqn of state & present day fraction of dark energy
35. ∞ Constant Eqn of State

Bound at $-1.097 < w_{de} < -0.858$ at 95% confidence level

(inaccurate) observational data

36. ∞ Weak gravitation lensing & gamma ray burst (wormholes & sp. Objects)

(∞ - natures/factors) & atmospheric & effects

37. ∞ Dark Matter \rightarrow negative mass \rightarrow particles mass negative \leftarrow from the annihilation from particles kinds of baryons

Dark energy origin \rightarrow negative pressure \rightarrow particle pressure negative (interatomic/intra/ ∞ -diff kinds) \leftarrow from the energy \rightarrow (+ive \rightarrow +ive particles / -ive \rightarrow -ive particles / ∞ - other variations) \rightarrow due to work done by/on matter of ∞ - kinds

38. ∞ dark matter \rightarrow dark energy (transform of the negative mass \rightarrow negative pressure)
(transition of the (quantities- ∞)) into one anothers

39. ∞ big – bang states universe homogeneous at larger scale \rightarrow true in some forms (not always true) & isotropic \rightarrow CMB photons from sky with same temperature

40. ∞ observation shows irregularities in the local/ region of the universe such as stars/galaxies & the inhomogeneities due to gravitational instability from a matter distribution as more homogeneities in past.

41. ∞ 4-D Homogeneous & Isotropic Space Time

(Friedmann- Lemaitre Robertson Walker (FLRW) spacetime \rightarrow Symmetric Spacetime

42. ∞ Energy Momentum Tensor of ∞ -matter & ∞ effects & ∞ particles & ∞ -energies

43. ∞ Christoffel symbol equates expansion from dynamical eqn of motion in the expanding universe

44. ∞ Contraction of Ricci Tensor gives Ricci Scaler

45. ∞ Energies & Momenta of matter

46. ∞ vanishing & Non-Vanishing components of Christoffel symbols

47. ∞ Hubble Parameter \rightarrow expansion rate of universe

(∞ - parameter) for expansion & contraction of universe & ∞ -other from of contraction & expansion.

48. ∞ FLRW restricted to perfect fluid form (energy momentum tensor)

49. ∞ dark matter & baryons

50. ∞ Relativistic particles (∞ forms phenomenon of particles based on phenomenon & effects)

51. ∞ Non-relativistic matter (effects natures of matter)

52. ∞ Newtonian gravity the pressure is related to a force associated with a local potential that depends on the position in space.

53. ∞ Time-Independent pressure $P(t)$ in FLRW spacetime \rightarrow General Relativity

54. ∞ $H \rightarrow (\Lambda) \rightarrow$ constant – flat universe

55. ∞ $\Lambda \rightarrow H \rightarrow$ dark energy & dark matter \rightarrow acceleration of universe

56. ∞ eqns of origins of ∞ kinds of matter

[∞ -factors/matters/ ∞ -particles/ ∞ -effects] \rightarrow [∞ -kinds of matters & energies & ∞ -other factors/natures] \rightarrow [∞ -forms of (likes acceleration) factors/natures of the galaxies/universe/multiverse/infiniteverse] \rightarrow [∞ -kinds of matters & ∞ -other factors/natures]

$A + B \rightarrow B + C \rightarrow A+B \rightarrow B+C$

[∞ - kinds of the eqns of formation of infinite universe/galaxies/multiverses/infiniteverses]

57. ∞ redshift \leftarrow hubble \leftarrow wavelength λ_0 of absorption lines of distant galaxies

58. ∞ Comoving distance 59. Peculiar velocity (movement of obj w.r.t local Hubble flow)
59. ∞ Distribution function distance describe phase space occupancy in equilibrium
60. ∞ Relativistic particles without degeneracies
61. ∞ Minimum vol. Of Phase Space
[∞ -form] [∞ -quantities] [∞ -quantities] [∞ -quantities]
62. ∞ Relativistic / Non-relativistic particles / matters- ∞
63. ∞ Non-degeneracies particles - ∞ /matters ∞ /effects ∞ /factors ∞ (mathematical operators ∞)
(*,-,/,+)
64. ∞ CMB photons
65. ∞ Eqns of Relativistic / Non-Relativistic Particles
66. ∞ Photons of 2 spins , its energy density
[Particles ∞ , [Particles ∞ , [Particles ∞
matter ∞ , energies ∞ , Matters ∞
effects ∞ , matters ∞ effects ∞
factors] effects ∞ factors ∞
factors ∞] densities ∞]
67. ∞ kinds of shifts like red-shifts
68. ∞ origin of dark energy & dark matter -> 100. (i) ∞ Special objects types generation
(ii) ∞ Non-baryonic type – axions & weakly
101. ∞ Interacting Massive particles (W/MPs)
102. ∞ Non-baryonic D.Matter
103. ∞ Non-pertubative QCD effects
104. ∞ Axions -> for reasons ->CDM
105. ∞ Geodesic Eqn
106. ∞ Proportionality Constant
107. ∞ Luminosity distance -> luminosity of supernova
108. ∞ Eqn of waves / of particles/matter
109. ∞ Time-Intervals -light emitted
(∞ nature phenomenon) (∞ transition)
110. ∞ Diameter - distance
(geometric ∞ forms (path,way, ∞ kinds)
of mathematical form)
111. ∞ radiation matter equality
112. ∞ Distribution at very scale is in homogeneous
113. ∞ Power Spectrum of ∞ dimension-able of quantities (like volume)
114. ∞ Discrete Sampling of Underlying field
115. ∞ Distribution of kinds of ∞ things of creator
116. ∞ average of galaxy density constant
117. ∞ Density Contrast field
118. ∞ Field in event spacetime
119. ∞ fluctuations
120. ∞ Temp \propto 1/scaler factor
121. ∞ Physical/ ∞ kinds of potential
122. ∞ Epoch/stage
123. ∞ Density parameter of radiation
124. [∞ - natures/ *factor* /matter/ particles / atmospheric effects/ is being suppressed (∞ tansition)
in relative (∞ forms) to the energy density (∞ nature (nature))
125. ∞ harmonic(∞ kinds) oscillations
126. ∞ hot/cold dark matter & ∞ - matter / ∞ energies & ∞ natures like this
127. ∞ QCD
128. ∞ Weak coupling with small mass

129. ∞ Dark Energy – 70% \rightarrow cosmic acceleration
130. ∞ Cosmological distances
 $\frac{\backslash}{/}$ dark energy
131. ∞ Comoving distances
132. ∞ Supersymmetric theories
133. ∞ Weak Interactions
134. ∞ Eqn of Waves / of particles/ matter
135. ∞ Time \rightarrow Intervals \rightarrow Light Emitted $\rightarrow \infty$ - transitions
(∞ nature phenomenon)
136. ∞ Degeneracy of the distance – redshift relation \rightarrow typical distant supernova & to CMB
137. ∞ distant supernova / (sp. Object)
138. ∞ evolve
139. ∞ CMB decoupling epoch to coupling
140. ∞ Continuity eqn
141. ∞ Power Spectrum
142. ∞ Monte Carlo Realization
143. ∞ Power Spectrum
144. ∞ Spatial Isotropy \propto modulus $r = |r| \rightarrow$ distance radius
145. ∞ Statistically Homogeneous
146. ∞ Gravitational potential or (∞ matters) like D.Matter density contrast
(∞ natures)
147. ∞ Fourier Space
148. ∞ Fluctuation in the Gaussian / ∞ other kinds
149. ∞ Statistical Properties of the fields
150. ∞ Eqn of state of dark energy/dark matter in nature & infinite other kinds of energies & matters
151. ∞ Big Rip/Finite Time Singularity
152. ∞ Hubble – Luminosity distance
153. ∞ Angular diameter distance
154. ∞ Observation of CMB anisotropies
155. ∞ Gaussian of matter / particles / effects / factors
(∞ kinds of atmospheres)
156. ∞ kinds of limits/derivatives \leftarrow Count variance in
157. ∞ Quantity / Transform the deviation from Gauss Matter to galaxy distribution
158. ∞ Linear Perturbation (external change / workdone)
159. ∞ Cosmological Perturbation Theory
160. ∞ Richer than this simple picture of universe
161. ∞ Free-fall with particles in perturbed Gravitational Field
162. ∞ Gauge Transform
163. ∞ Quantities change in different transform
164. ∞ Decomposition Analogous
165. ∞ Couple to density pertubation
166. ∞ Divergences
167. ∞ Positional forms (velocity perturbation)
168. ∞ Divergences & tensors
169. ∞ Anisotropic Perturbation
- 170.

(Tensor/forms/divergence/delta/integral/mathematical operations) + (∞ kinds of factors phenomenon, matter , particles , effects)

171. ∞ perturbation/ ∞ kinds of phenomenon metric
172. ∞ Quantities (11, 22, 33,... so on)
(one -one , two – two , three – three kinds,..... so on)
- for the ∞ kinds of universe, galaxies, multiverses, infiniteverses
173. ∞ Galaxies/Universes/Multiverses/Infiniteverses velocities / Access & fields/ quantities- ∞
174. ∞ Mass Power Spectrum / Bulk Form
175. ∞ Fluid model of universes
176. ∞ Scaler Independent
177. ∞ Universe/Galaxies/Multiverse/Infiniteverses/ Unbiased velocity field
178. ∞ Gravitational/ Phenomenons reasons to interactions, separations, other ∞ forms
179. ∞ Relativistic Framework
180. ∞ Massless Quantity (full)
(∞ forms) (∞ forms)
181. ∞ Positional dependence
(angular)
182. ∞ Strong Coupling
183. ∞ Monopole
184. ∞ Irrational
185. ∞ Pressure-less matter component
186. ∞ Scattering process
187. ∞ Perturbation not effect (by collision)
188. ∞ perturbation effect by (∞ other effects / phenomenon)
189. ∞ Contraction & Expansion & Fluctuation of Spacetime of Universe
& role of special bodies & effects & Phenomenons & atmospheric effects
(∞ forms of)
190. ∞ Matter / Effect ∞ kinds – distribution of ∞ kinds
191. ∞ Quadruple of Gravitational Potential acts as same
 ∞ kinds| ∞ kinds of (∞ kinds \backslash _____ $\phi \approx - \psi$
nature/factors/ of natures/factors /
effects) effects)
192. ∞ Quantum Fluctuation of the Scaler Field (could “Inflation”)
193. ∞ Scaler In-variation Density Perturbation
194. ∞ Propagation of ∞ - particles / ∞ matter / ∞ effects / ∞ special objects / ∞ factors / intrinsic /
extrinsic / ∞ forms of In & Out
195. ∞ Weak lensing
196. ∞ Geodesic eqn
197. ∞ Large scale structure (LSS)
198. ∞ Dark energy not constant/constant & distribution of such energies
199. ∞ Explosion of supernova is luminous & cause the burst of radiations
200. ∞ Flux
201. ∞ Luminosity Distance
202. ∞ Supergravity & superstring theories & Non super gravity & non
203. ∞ Phantom eqn
204. ∞ Antisymmetric Universe -> transition -> Symmetric universe
205. ∞ Field Potential
206. ∞ Energy Field of the field
207. ∞ Energy Density of field
208. ∞ Quintessence energy momentum tensor
209. ∞ Eternal differ vaccu in widely separate region of universe
210. ∞ with & without of ∞ matter, ∞ energies, ∞ natures, ∞ factors
211. ∞ forms fields
212. ∞ Dark Matter & Dark Energy kind ∞ universe, galaxies with the ∞ dimension exist

in the way to special object in our galaxies & universe

213. ∞ kinds of matters with ∞ variations of other different matters at the time of the ∞ origins of universes, galaxies, multiverses, infiniteverses at same/ ∞ different infinitesimal time in the along with the Relativistic-quantum states of spacetime of past/present/future where the special objects act with as the presence for all those quantum universes, galaxies, multiverses, infiniteverses at the all those quantum-relativistic states of (different combination of ∞ matters worlds) / (past/ present/ future... ∞ other event-spacetime frames) as well as all of those times. (Huh!)

214. ∞ Inflationary

215. ∞ Matter fields

216. ∞ dynamically supersymmetry

217. ∞ Eqn of State of Dark Energy/Matter
(∞ kinds)

218. ∞ Energy fraction (∞ nature/factor/effects) dark energy

219. ∞ radiation & matter era

220. ∞ Freezing Quintessence

221. ∞ Field Displacement & Field Mass \rightarrow Cosmic Acceleration

222. ∞ Eqn of State of Quintessence

223. ∞ Attractor

224. ∞ Evolution of the field during radiation & matter dominated epochs

225. ∞ Field Mass

226. ∞ Several Field lead to acceleration of ∞ matter / ∞ natures/ ∞ energies

227. ∞ Globally Super Symmetric QCD

228. ∞ Quarks & Anti-Quarks

229. ∞ Axion Fields

230. ∞ PNGB model

231. ∞ Dilaton Coupling Violation

232. ∞ Dilation Field

233. ∞ Ghost Scaler Field

234. ∞ Einstein Frame Potential

235. ∞ Dilation Field

236. ∞ Conformal Transformation the act in Einstein Frame

237. ∞ Instability Problem of Quantum Fluctuations

238. ∞ K-Essence

239. ∞ Quantum Instability

240. ∞ Phantom Eqn of State

241. ∞ Super-potential

242. ∞ Angular Massless Field

243. ∞ -ive Energy

244. ∞ Phantom Field

245. ∞ Superluminal Propagation

246. ∞ Matter fields coupling with other ∞ fields of effects & natures & factors

247. ∞ Not only Radiation & ∞ other natures/ factors & effects to get to know ∞ matters, ∞ energies, ∞ natures, ∞ effects

248. ∞ Phase Space No. Density of Ghosts & Phantoms

249. ∞ Neutrinos & dark energy \rightarrow direct coupling

250. ∞ Relativistic & Non-relativistic \rightarrow dark matter & Baryons – coupling with fields

251. ∞ In accelerated epoch , the ratio of the neutrinos energy density to the scaler field energy density

252. ∞ Quasar

253. ∞ Lagrangian density describing such a coupling is given by

$$L(f) \phi = -1/4 B \times (\phi) F_{\mu\nu} F^{\mu\nu}$$

254. ∞ ϕ MDE

255. ∞ Quantum Loop Gravity
256. ∞ State-finder model
257. ∞ Acceleration & de-acceleration of scalar field
258. ∞ Phantom Field
259. ∞ Cosmological Dynamics
260. ∞ Anisotropic Energy
261. ∞ Dark Energy = Dark Energy
(Energy Density) (Energy Density)
262. ∞ Dilatonic Ghost Condensate Model
263. ∞ Gravitating \rightarrow Attractions Particles of
264. ∞ Attractions Particles of ∞ kinds
265. ∞ Ghost Fields & other matter field interactions
266. ∞ Positive Energy Density of (Large Scale Gravitational Waves
267. ∞ Nucleosynthesis
268. ∞ Particle based Field
269. ∞ [Phantom + Normal Fields + ∞ kinds of fields] in galaxies, universe, multiverse, infiniteverses
270. ∞ Quasar Absorption Line
271. ∞ Field Eqn of State
272. ∞ Scaling & Phantom & Non-Phantom Acceleration / Perturbation Stability
273. ∞ Massless field coupled to gauge fields
274. ∞ Quintessence / Another scalar field is responsible for the time variation of $\dot{\alpha}$ the fields ϕ & an electromagnetic field.
275. ∞ Asymptotic Eqn of state
276. ∞ Effective Matter Density
277. ∞ Singularities future
278. ∞ Dark Energy from gravity
279. ∞ Matter Radiation Equality $\rightarrow \infty$ - Nature – Nature - ∞ _ Equality
280. ∞ Redshift
281. ∞ Dark Matter & Dark Energy coupling fields & scalar fields interaction
(∞ kinds of matters & ∞ kinds of factors/natures coupling fields & scalar fields , despite of that ∞ other fields interactions)
283. ∞ Positive Energy Density of | Large Scale Gravitational Waves
284. ∞ Ghosts Fields & other matter fields interactions
285. ∞ Gravitons \rightarrow attraction particles of ∞ kinds
286. ∞ k-essence field energy momentum tensor
287. ∞ Dilation field
288. ∞ Super Symmetry Breaking
289. ∞ negative potential (∞ kinds of fields potential)
290. ∞ Quintessence energy density $\dot{\alpha}$ background density
291. ∞ Big Bang Nucleosynthesis
292. ∞ mass is unstable against radiative corrections in the absence of supersymmetry
293. ∞ Globally Supersymmetric QCD
294. ∞ Quintessence Energy Density
295. ∞ Axiom fields
296. ∞ Ghost scalar field
297. ∞ Dilaton Coupling Violation
298. ∞ Baryonic / Dark Matter
299. ∞ Many Dimensional Gravity / Nature theories
300. ∞ Inhomogeneities with dark energy $\rightarrow \infty$ kinds of genetics
301. ∞ Infinitesimal surfaces / geometric shapes
302. ∞ Spatial Curvature

303. ∞ Gravitational Transfer form one dimensional to other dimensional to other dimensions at large scale
 304. ∞ Density Perturbation
 (∞ natures)
 305. ∞ Void function
 306. ∞ Acoustic Oscillations
 307. ∞ CMB dipole in ∞ poles in Quasars <- Paradox of
 308. ∞ [∞ Quantities & ∞ Quantities] perturbation \propto acceleration
 309. ∞ Peculiar Velocity & Strong Fluctuations
 (∞ quantities)
 310. ∞ Dependent & Independent of Curvature & Geometric
 311. ∞ Dark Energy & dark force
 312. ∞ perturbation & natures eqn
 313. ∞ DGP model
 314. ∞ fluid mechanics
 315. ∞ Gaussian & fisher matrix
 316. ∞ Shell & Geometrically Nature & effects / factors - ∞
 317. ∞ turn around
 318. ∞ over density
 319. ∞ non-linear
 320. ∞ mechanics kinds, ∞ energy branch of physics/bio/chemistry
 321. ∞ Frequentist as Physicist
 322. ∞ Statistical Method & Analytics
 323. ∞ Probability
 333. ∞ PDF (Probability Distribution Function)
 334. ∞ Comoving No. Density
 335. ∞ Conditional Probability
 336. ∞ Principal Component Analysis (PCA)
 337. ∞ Speed of natures of matter ∞ particles effects factor
 338. ∞ Un-perturbated
 339. ∞ Power-Spectrum of fields / effects / phenomenon
 (nature ∞)
 340. ∞ Abundance of cluster & baryon fraction
 341. ∞ Inter-Clustor Medium
 342. ∞ Systematics
 343. ∞ Pure Geometrical Effects
 344. ∞ Obj from in dark matters halo
 345. ∞ kinds of physical/ biological/chemical (quantities/ quantities-quantitates/ ∞ quantities- ∞ quantitates, so on till the increasing the quantities on LHS and RHS till ∞) based on the there presence in the infiniteverses of ∞ kinds for various kinds of environments in nature as because of the not only negative quantities but ∞ kinds of quantities based on ∞ kinds of mathematical operators existence in nature.